

## DOUBLE ORBITAL TRANSMISSION

### Abstract of the Invention

A double orbital transmission is disclosed which has first and second input shafts (12 and 13) which carry first and second eccentrics (14 and 16). The pawl carrier (24) is mounted on the second eccentric and the pawl carrier carries a plurality of pawls (32 and 34). An orbital body (50) is mounted on the first eccentric (16) and carries first and second assembler rings (42 and 44) for engaging with the pawls (32 and 34). The pawls (32 and 34) are restrained to undergo orbital motion by an orbit control plate (104) and the orbital body (50) is also constrained to undergo orbital motion and orbital control plate coupled to an output (120). A phase controller is provided to control the phase relationship between the two input shafts (12 and 13) and therefore the drive ratio of the transmission by controlling the phase relationship between the eccentrics (14 and 16). The combined orbital motion of the assembler rings (42 and 44) and the pawls (32 and 33 cause rotary power to be transmitted from the input shafts (12 and 13) to the output (120).